

Work Order ID 144477

April 19, 2016 10:13:38 AM

144477

Page 1

Item ID: D4006-5 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Foam
 Start Date: 4/21/2016 Start Qty: 12.00 ***12*** Cust Item ID:
 Required Date: 4/29/2016 Req'd Qty: 12.00 ***12*** Customer:
 Reference:

Approvals: Process Plan: SH Date: 20160419 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4006	B								
100		0.00							
100									
Waterjet	Memo	0.12							
FLOW CNC Waterjet	1-Cut as per Dwg								
	Dwg Rev: <u>B</u>								
	Prog Rev: <u>B</u>								
	2-Deburr if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.12							
Quality Control									

(12) _____ 2016/04/20
 (12) _____ 2016/04/20

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																	
OTHER : ☐																									

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Page 2

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 Revision ID: Stop ***NS2***
 Item Name: Foam
 Start Date: 4/21/2016 Start Qty: 12.00 ***12*** Cust Item ID:
 Required Date: 4/29/2016 Req'd Qty: 12.00 ***12*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC8- Inspect parts - second check	0.00							
120									
QC	Memo	0.24				(12)			DAS 38 9-89
Quality Control									APR 21 2016
170	Identify as per dwg & Stock Location: <u>STOPO</u>	0.00							
170									
Packaging	Memo	0.12				12			DAS 6 9-89
Packaging									APR 22 2016
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	1.20							
Quality Control						ML5			APR 22 2016

ML5 APR 22 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

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Page 1

Work Order ID: 144477

144477

Parent Item: D4006-5

D4006-5

Parent Item Name: Foam

Start Date: 4/21/2016

Required Date: 4/29/2016

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP rev A 09.12.22 new Issue Prelim EC verified by:DD IPP Rev:B
10.05.03 as per ECN10-562 DD verified by:EC IPP REV:C 12.03.07
AS PER DWG REV.B DD VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M4111NS.125		Purchased		No		100	sf	241.5770	0.118	1.490526			

M4111NS 125

4111 Black Neoprene/EPDM/SBR Blend Sheet 0.125"

Re 16/04/20

Location

Loc Qty

Loc Code

MAT052

241.577

m130068

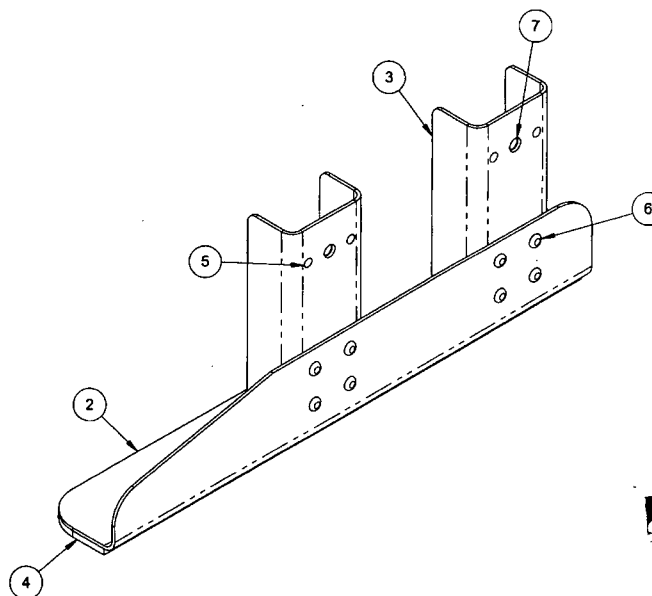
16.577

m134321

225

1.5

ITEM NO.	QTY. -041	PART NUMBER	DESCRIPTION	JOHN CAMERON AVIATION PART NUMBER
1	X	D4006-041	TANK TOP SUPPORT ASSEMBLY	JCA-M47-2-01
2	1	D4006-1	ANGLE	
3	2	D4006-3	CHANNEL	
4	1	D4006-5	FOAM	
5	4	MS20426AD3(-4)	RIVET	
6	8	MS20470AD4(-5)	RIVET	
7	2	MS21059-4	ANCHOR NUT	



D4006-041 TANK TOP SUPPORT ASSEMBLY

20160419

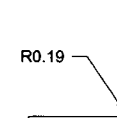
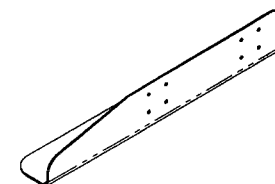
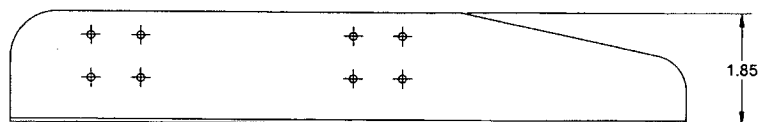
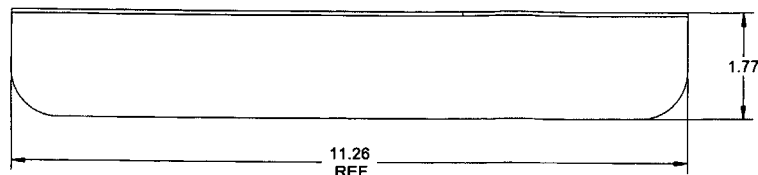
RELEASED
2012-03-02
MP

SJA
144477

- NOTES:**
- 1) MATERIAL: N/A
 - 2) FINISH: POWDER COAT "ANSI 61 GREY" (4.3.5.15) PER DART QSI 005 4.3 BEFORE INSTALLATION OF D4006-5 FOAM AND MS21059-4 ANCHOR NUTS
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
 - 7) WEIGHT: 0.48 lbs

B	CHANGE POWDER COAT FROM "GREY SANDTEX" TO "ANSI 61 GREY", ZN A7-1.	DC	12.02.28
A	NEW ISSUE	AS	10.02.05
REV.	DESCRIPTION	BY	DATE
DESIGN	AS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	SL		
CHECKED	AS	DRAWING NO.	REV. B
MFG. APPR.	FE	D4006	SHEET 1 OF 6
APPROVED	MP	TITLE	SCALE
DE APPR.		UPPER RESTRAINT	NTS
DATE	12.02.28	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

DART AEROSPACE PART NUMBER	JOHN CAMERON AVIATION PART NUMBER
D4006-1	REF JCA-M47-2-01



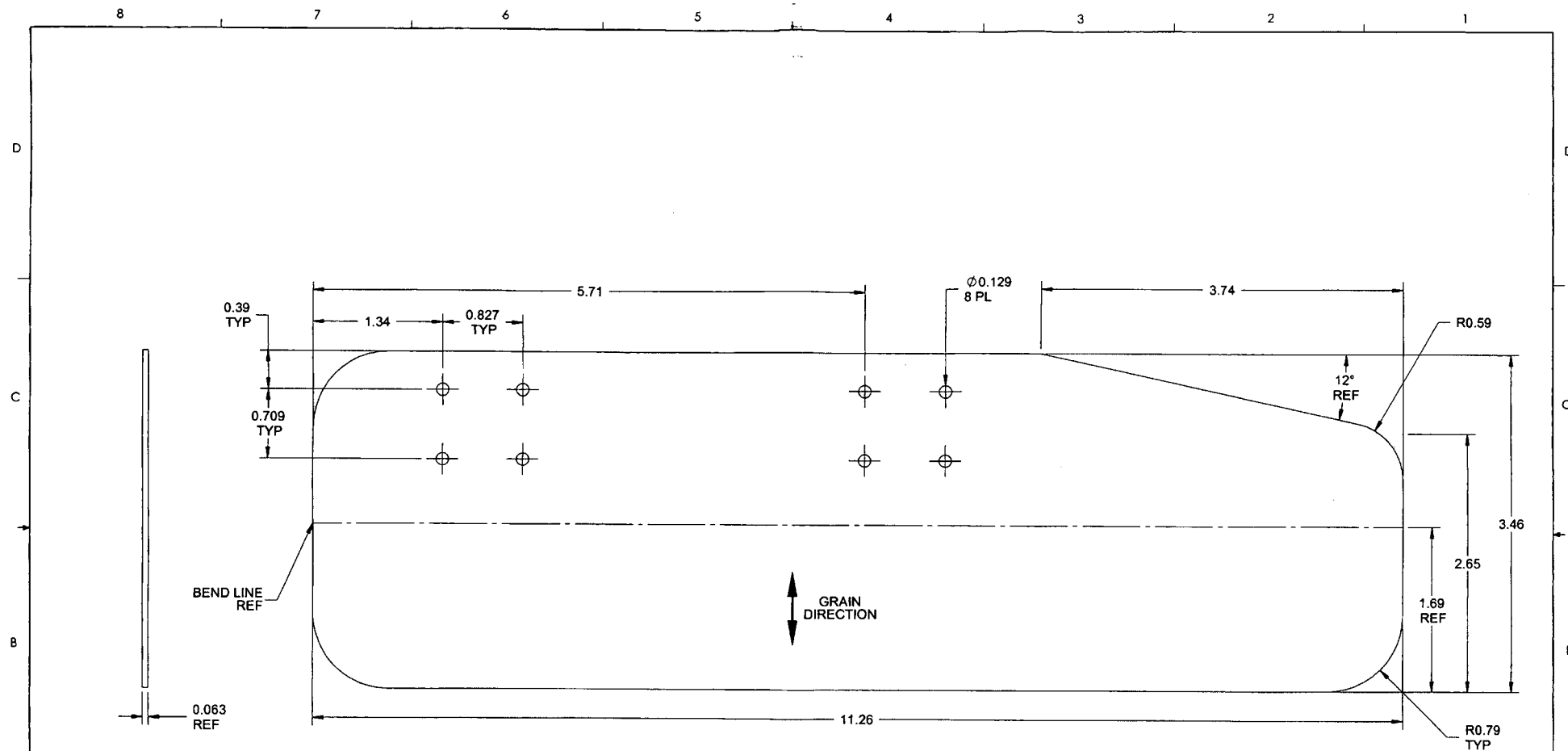
D4006-1 ANGLE

RELEASED
2012-03-02
JN

NOTES:

- 1) MATERIAL: MADE FROM D4006-1F
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.23 lbs

DESIGN	JB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	BC		
CHECKED	JB	DRAWING NO.	REV. B
MFG. APPR.	BE	D4006	SHEET 2 OF 6
APPROVED	149	TITLE	SCALE
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D4006-1F FLAT PATTERN

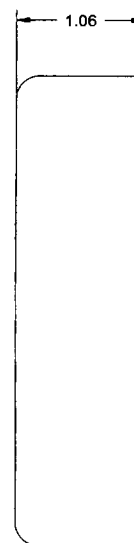
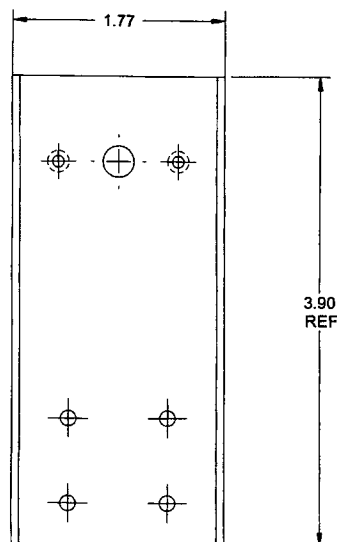
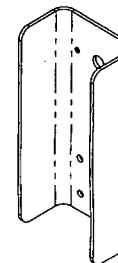
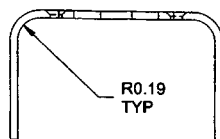
NOTES:

- 1) MATERIAL: 2024-T3 ALUMINUM SHEET, 0.063 THICK
PER QQ-A-250/4 OR AMS-QQ-A-250/4
OR AMS 4037 OR ASTM B209
REF DART SPEC M2024T3S.063
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.23 lbs

RELEASED
2012-03-02

DESIGN	DE	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	DC		
CHECKED	DE	DRAWING NO. D4006	REV. B
MFG. APPR.	DE	SHEET 3 OF 6	
APPROVED	DE	TITLE	SCALE
DE APPR.	DE	UPPER RESTRAINT	NTS
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DART AEROSPACE PART NUMBER	JOHN CAMERON AVIATION PART NUMBER
D4006-3	REF JCA-M47-2-01

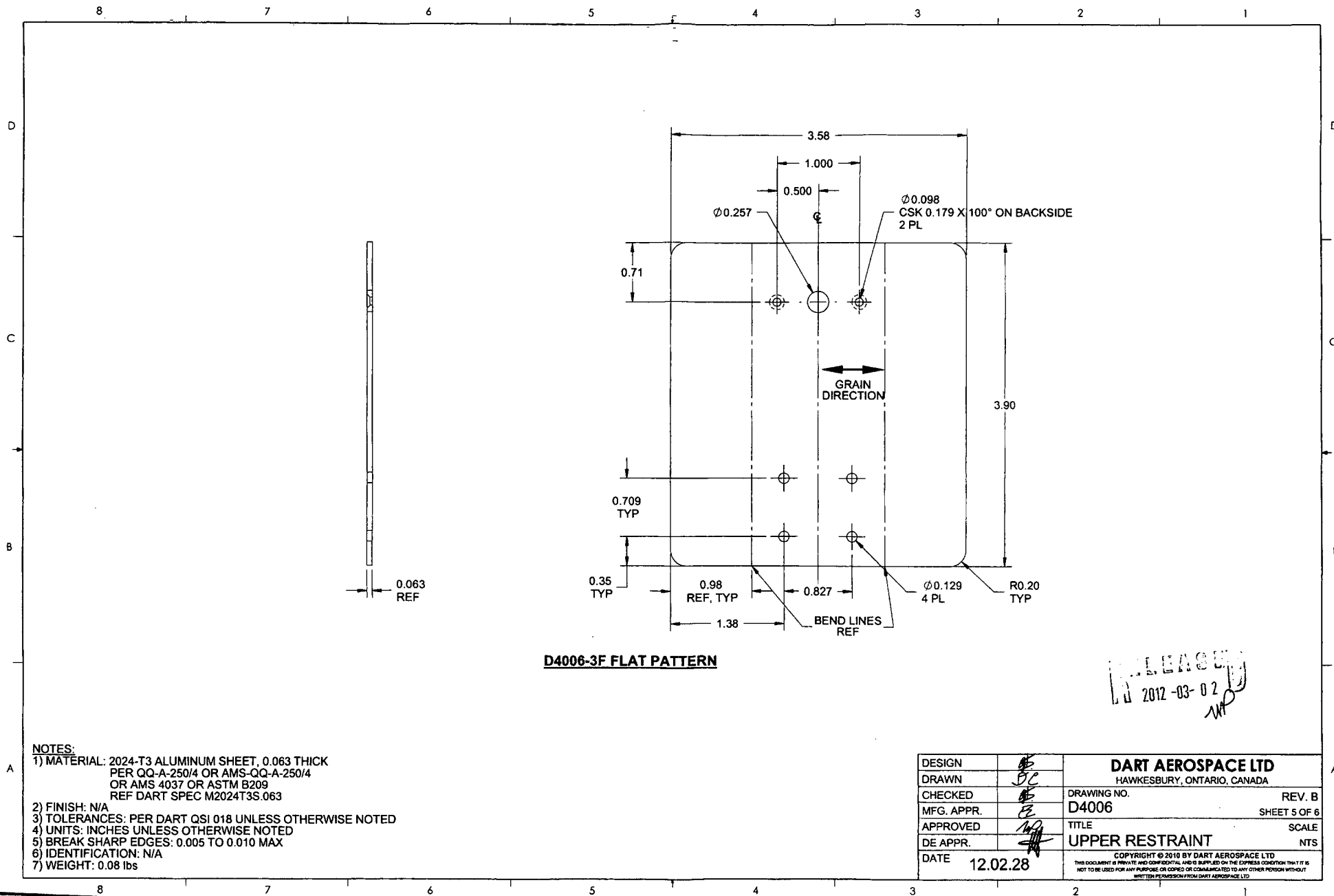


D4006-3 CHANNEL

RELEASED
2012-03-03
AW

- NOTES:
- 1) MATERIAL: MADE FROM D4006-3F
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.08 lbs

DESIGN	DE	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	DL		
CHECKED	DE	DRAWING NO.	REV. B
MFG. APPR.	DE	D4006	SHEET 4 OF 6
APPROVED	AW	TITLE	SCALE
DE APPR.	AW	UPPER RESTRAINT	NTS
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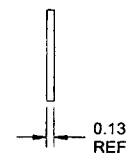
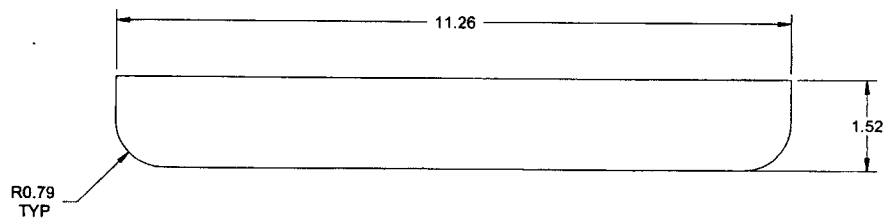


NOTES:

- 1) MATERIAL: 2024-T3 ALUMINUM SHEET, 0.063 THICK
PER QQ-A-250/4 OR AMS-QQ-A-250/4
OR AMS 4037 OR ASTM B209
REF DART SPEC M2024T3S.063
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.08 lbs

DESIGN	<i>BC</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	<i>BC</i>	DRAWING NO.	REV. B
CHECKED	<i>BC</i>	D4006	SHEET 5 OF 6
MFG. APPR.	<i>BC</i>	TITLE	SCALE
APPROVED	<i>BC</i>	UPPER RESTRAINT	NTS
DE APPR.	<i>BC</i>	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	
DATE	12.02.28		

DART AEROSPACE PART NUMBER	JOHN CAMERON AVIATION PART NUMBER
D4006-5	REF JCA-M47-2-01



D4006-5 FOAM

NOTES:

- 1) MATERIAL: BLACK NEOPRENE/EPDM/SBR BLEND SHEET, 0.125 THICK
PER ASTM D 1056 GRADE 2A1 OR SAE J-18 GRADE 2A1
REF DART SPEC M-4111N-S.125
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.08 lbs

DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	DC		
CHECKED	DB	DRAWING NO.	REV. B
MFG. APPR.	FE	D4006	SHEET 6 OF 6
APPROVED	MA	TITLE	SCALE
DE APPR.	MA	UPPER RESTRAINT	NTS
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2012-03-02
MA

